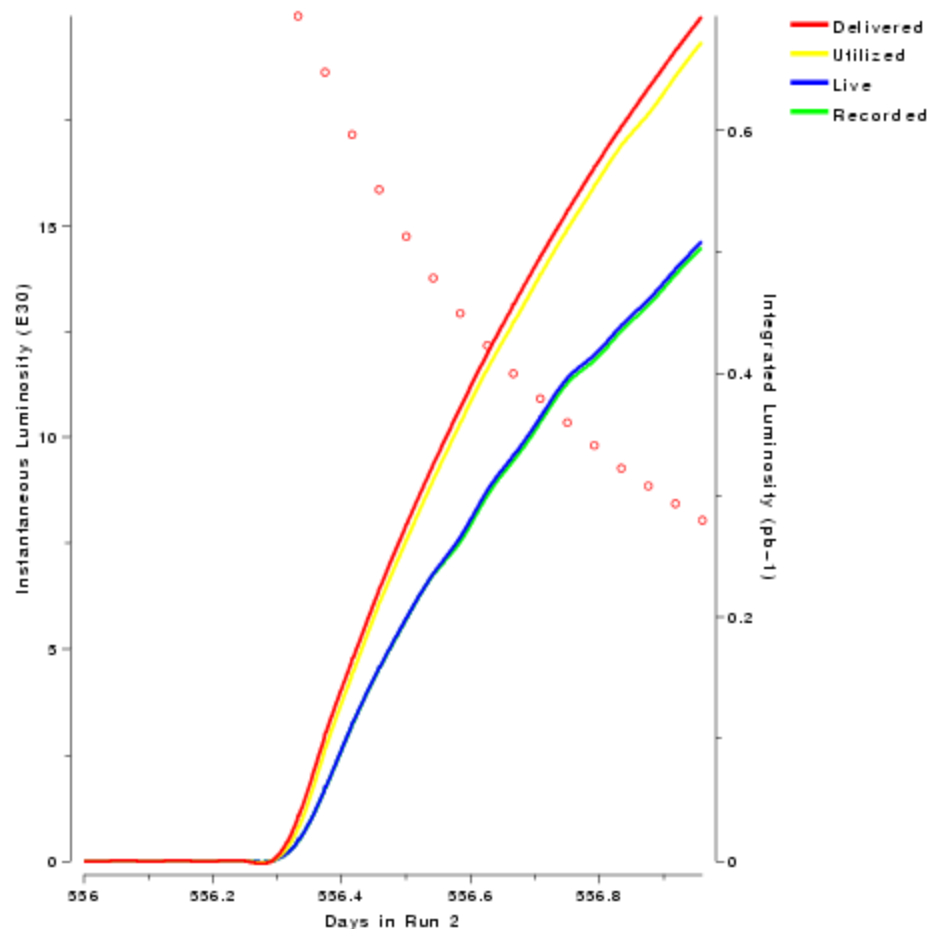
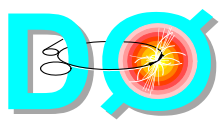


Week of September 2 to September 8 D0 Summary

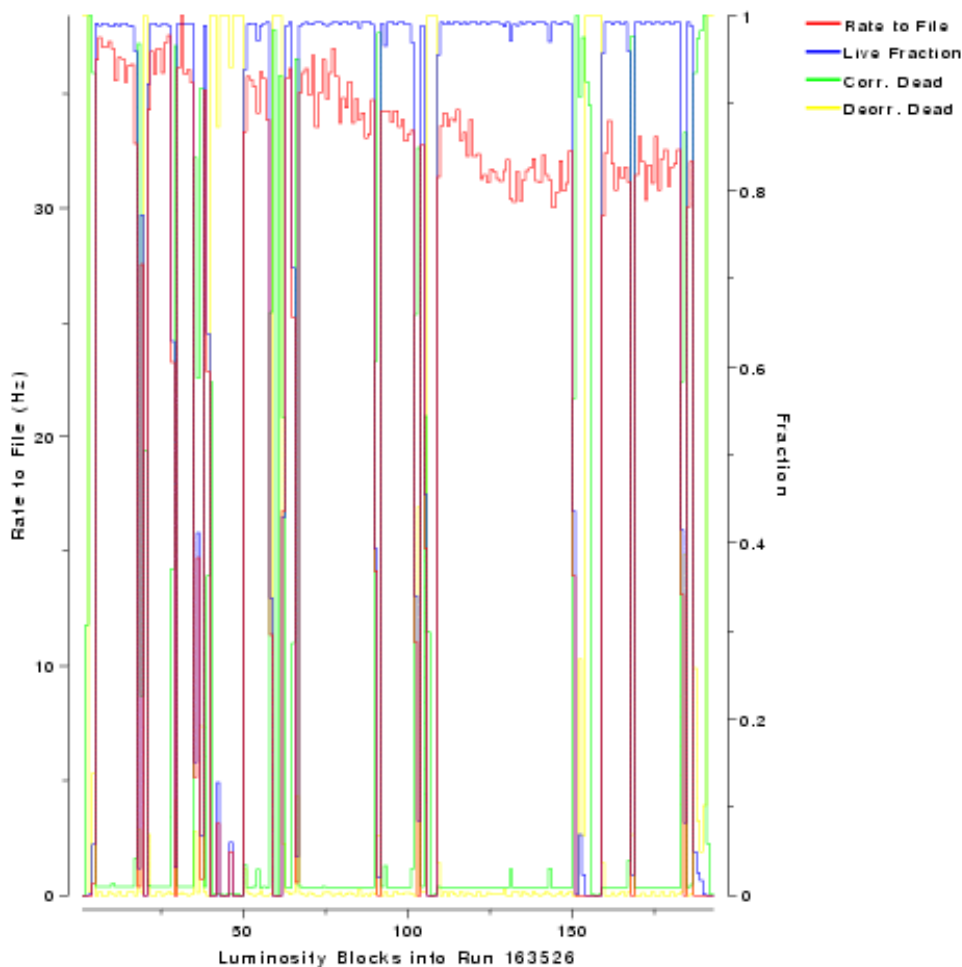
- Delivered luminosity and operating efficiency
 - ♦ Delivered: 3.9pb^{-1}
 - ♦ Recorded: 2.4pb^{-1} (~62%)
- Data taking efficiency
 - ♦ no major hardware/software problems
 - ♦ during Sunday our "to tape" efficiency was stable at ~73%
 - ♦ different problems caused 1-2 hours downtimes
 - ▲ Silicon readout problems
 - ▲ Failure of muon PDT LVPS
 - ▲ Often CFT downloads
 - ▲ L2 muon inputs loss of synchronization
- Accelerator halo
 - ♦ reasonable
- Beam position
 - ♦ stable within 0.3mm from the detector center

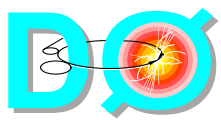




Data Taking During Global Runs

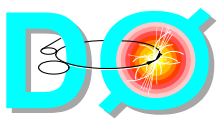
- Typical global physics run duration is 2 hours
- During global run ~20% of time is used for
 - ◆ reset synchronisation between front-ends and trigger framework (SCL)
 - ◆ HV trips in silicon
 - ◆ re-download of front-end crates for fiber tracker
- Working on
 - ◆ fixing some problems
 - ◆ reducing effect of another problems by developing quick recovery procedures
- Our goal over next few months to get to rate to tape efficiency of 75%





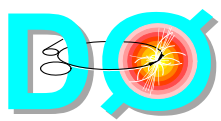
DO Detectors Status

- Luminosity detector
 - ♦ Stable operation
 - ♦ Estimated luminosity measurement error is 10%
- Silicon detector
 - ♦ Power supplies are running well - no problems for 3 months!
 - ♦ Noises stable: ~94% of channels are in operation
- Fiber tracker
 - ♦ Stable operation with all channels in readout
 - ♦ Major issue is hot/empty groups of channels
 - ▲ in progress of studying this issue
- Calorimeter
 - ♦ Stable
 - ♦ Different sources of low energy noises are under investigation
- Muon
 - ♦ Stable operation
 - ♦ Major issue is "data integrity"
 - ▲ on the 10^{-3} - 10^{-4} level there is mismatch between portion of event collected from different crates
- Forward proton detector
 - ♦ inserting pots during most stores



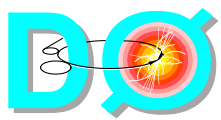
He Concentration in the Hall

- D0 operates ~7,000 phototubes in the collision hall
 - ◆ He has high coefficient of diffusion through the glass
 - ◆ at ~ a few ppm level He concentration inside the phototube could affect tube parameters badly
 - ▲ afterpulses
 - ▲ gain loss
 - ◆ with concentration of He in the hall of ~20ppm (x4 natural level) the tubes lifetime is estimated at ~30 years
- D0 measured He levels a few times during last few months and level was in the 10-20ppm level
- Late August we discovered that He level elevated to ~600-900ppm
 - ◆ the actual reason for the raise is not understood (TeV quenches?)
 - ◆ source of He traced to air flow from the tunnel into the hall
 - ◆ three items helped to resolve this issue
 - ▲ extra sand bags in the tunnel
 - ▲ special "curtains" between D0 and the tunnel
 - ▲ pressure in the hall is increased to stay above tunnel pressure
- Over last week He levels in the collision hall are stable at ~20ppm
- He concentration in the tunnel is still high at ~1000-2000ppm
 - ◆ forward proton detector PMTs?



Data Taking and Triggering

- Running physics trigger list 8.2
 - ♦ designed for luminosity in the range $(5-25)10^{30}$
 - ♦ keep high p_T triggers un-prescaled at any luminosity
 - ♦ addition of new tools which became available recently
 - ▲ tracking at the Level 3 trigger
- Typical trigger/DAQ rates
 - ♦ L1 trigger 0.3-0.35kHz
 - ♦ L2 trigger 0.15-0.2kHz
 - ♦ L3 trigger (to tape) ~50 Hz
- Total number of events collected over last week
 - ♦ 6.7 mln
- Reco reconstruction speed is improved with new version 11.11
 - ♦ processed about 4 mln events per week



Summary

- D0 Collaboration is progressing well with physics data taking
 - ◆ no major problems with detectors/electronics/triggers/DAQ
 - ◆ all detectors are in readout
 - ◆ trigger list 8.20 is running on-line
 - ▲ collected ~6.7 mln. events during last week
 - ◆ average data taking efficiency is ~65% over a week, ~75% over a "good" day, and ~85% for a "good" run
 - ▲ working on short and long term programs how to increase above numbers without compromise of the quality for the data we collecting